Jewish woman go to work in a factory after she is married. Hysteria and neurasthenia are, however, very common among Jews; the author suggests as one explanation that "the Jews, who for centuries have been maltreated or at least harassed, have had their nervous system shattered, hence their nervousness to-day." Further, the majority of Jews have for eighteen centuries been town-dwellers, and like all other town-dwellers have degenerated physically, but unlike the others they have had no healthy, fresh country blood for their rejuvenation. "The evil effects of the strained, nerve-shattering city life have thus been deeply rooted in their bodies and minds, and are kept up by hereditary transmission. With each new generation the nervous vitality of the Jews lessened, and one of the results of this mode of life is that most of the diseases which increase with the advance of civilization, especially the neuroses and psychoses, are more common among them than among others. . . . Commerce, banking, speculating, small trading and the professions known as precarious occupations entail a large amount of care, worry and anxiety. It is well known that the speculator and the merchant, on meeting with reverses, often lose their mental balance. In the case of the Jews, the majority of whom are what are known in the vernacular as 'bundles of nerves,' this over-exertion of the nervous system is liable to do more harm than in others. . . . . Fifty years ago the criminology of the Jews was a good indication of what modern society is coming to under the stress of intense commercial and financial activity. In this respect, as was the case with many other peculiarities, such as the excessive number of psychopathics and neuropathics, the Jews have only been the advance agents. . . . A careful study reveals that it is not the body which marks the Jew; it is his soul. The type is not anthropological or physical; it is social or psychic. . . . Centuries of confinement in the Ghetto, social ostracism, ceaseless suffering under the ban of abuse and persecution have been instrumental in producing a characteristic psychic type which manifests itself in his cast of countenance, which is considered as peculiarly 'Jewish.'"

It is impossible within the limits of a short review to draw attention to the large number of questions opened up by this most interesting and suggestive book. The reader is impressed by the cumulative effects of conditions of life, social factors, religion and the rest in moulding a somewhat heterogeneous people into a semblance of similarity. The Jew has, so to speak, been pressed into shape by his religion on the one hand and the Gentile on the other, and it is only when the pressure is maintained that the type remains constant, and any relaxation of either constraining force is sufficient to denationalise the Jew. Dr. Fishberg evidently agrees with Ruppin's statement that "orthodoxy and poverty, assimilation and prosperity are almost synonymous terms with the Jews." Those who desire to keep the Jews as a distinct nation have a task before them which is apparently insuperable. In the past an enormous number of Jews have become Christians mainly from motives of policy, there being Jewish blood where it is little suspected and the traces now quite unrecognisable, and the process is being continued at a yet more rapid rate. Dr. Fishberg maintains that "denationalization has gone too far to admit repatriation of the Jews, and the solution of the perennial Jewish problem can be, and is being, accomplished in the countries in which they live at present."

A. C. HADDON.

Reid, G. ARCHDALL, M.B., F.R.S.E. *The Laws of Heredity.* With a Diagrammatic Representation by HERBERT HALL TURNER, *Savilian Professor of Astronomy, Oxford.*

DR. REID'S book is one of unequal merit. The most valuable part is that in which he discusses the effect of disease on Natural Selection. His treatment of subjects which precede and follow this central theme in our view is much less satisfactory.

That disease has a selective value is obvious. Generations exposed to tuberculosis or measles get purged of those strains especially liable to the diseases, and gradually a race is evolved more and more immune to those particular scourges. But till Dr. Reid's comprehensive and convincing exposition we think no one had realised the preponderating influence disease now possesses in the process of moulding the future character and qualities of the human race. Dr. Reid indeed holds that "the only racial progression, certainly the only considerable racial progression, the civilised races undergo is one against disease." That sweeping generalisation may be too broad; but that disease is *a* most effective agent, perhaps *the* most effective agent at work during historical ages, we consider proved by Dr. Reid's investigation.

Perhaps the most striking of the many illustrations he gives is found in the contact of the old world with the new produced by the voyage of Columbus.

"On the one side of the Atlantic were peoples who for thousands or tens of thousands of years had been slowly evolving resisting power against a multitude of maladies—peoples whose increase had been very slow, largely because of the numbers of the unfit that had perished from disease. . . . These Eastern peoples now dwelt under conditions that would have been fatal to their remote ancestors. Their civilisation, with its dense communities and constant communication between distant parts, was absolutely conditioned by their power to resist many diseases. . . . On the other side of the Atlantic were peoples who had undergone no evolution against any zymotic malady except malaria. . . . At once . . . air-and-water-borne diseases began to sweep in great waves of pestilence over the whole vast regions of the West. The entire population was susceptible; and, therefore, almost every individual was stricken down."

So in many other cases; the diseases brought by foreign conquerors, if new to the conquered race, are more deadly than fire and sword. On the other hand, if the disease-conditions be reversed, the conquered may exterminate their conquerors.

The effect of alcohol is similar to that of disease. A race which for centuries has been exposed freely to the temptation to alcoholic excess acquires partial immunity. Those individuals in whom desire for alcohol overcomes the opposing motives tend to die young and leave few descendants. A taste for alcohol being hereditary, the race is gradually freed from those families who are powerless to resist its temptation. The race on the average becomes more sober.

The nations of South Europe, among whom wine has always been cheap and plentiful, though intemperate in early stages of their history, are now very sober; a drunken man is seldom seen. England, where alcohol was a rarity till a later date, still suffers from drunkenness, but it may be pointed out that the upper classes, who for many generations have been able to get alcohol freely, have probably been undergoing a similar process of evolution. They now seldom drink to excess.

If extreme temperance reformers had their way, and alcohol were prohibited, Dr. Reid points out that "a race like the British, which had undergone some evolution, would tend to retrogress towards that primitive state in which the average racial susceptibility to the charm of alcohol was much greater than it is at present." If, at some future time, alcohol became procurable, "the last state of the race would be worse than the first."

It seems that many other qualities besides sobriety get fixed in nations or classes by similar means. Thus a certain minimum standard of honour and honesty are necessary for the continued presence of a family in the upper ranks of the country. Those families in which such qualities are not found fail to maintain their position, while those in which they are hereditary stand secure.

To us it seems that Dr. Reid does not lay enough stress on the fact that "survival" alone is not the essential factor in evolution. Survival of the fit is of no use to the race unless the fit produce and rear a preponderating

number of offspring. In the modern civilised life of mankind, at all events, the best chance of survival does not always mean the probability of the greatest number of children.

Since the systematic restriction of the birth-rate began about 1875, this want of co-ordination has become much greater than before. To examine the tendencies of the race it is not sufficient to compare the bills of mortality in different classes, or to rely only on the figures quoted by Dr. Reid to show that the drunken man dies earlier than the sober. If the sober be also so provident and thrifty that, in existing conditions, he thinks it necessary to limit his family to one or two, and the drunken, in his short and merry life, becomes the proud though tipsy father of twelve, it may well be that our race is beginning to revert by a process of natural selection to a condition of even greater appreciation of the advantages and consolations of excessive indulgence in alcohol. Thus here, as in most problems about present-day social evolution, former conclusions need reconsideration in the light of the voluntary restriction of the birth-rate.

Dr. Archdall Reid is primarily a physician and biologist, and we have little but praise for his treatment of the evolutionary effect of disease. He may under-estimate other factors in present evolution, but his treatment of the disease factor is convincing. But when Dr. Reid enters the paths of philosophy at the beginning of his volume, and emerges as an educationalist at the end, he does not always carry us with him in his arguments. Facts are facts, even though discovered in a laboratory and recorded by Mendelians. And not all of those who have to deal with education will agree with Dr. Reid that "a child of normal capacity may be trained to a degree of stupidity resembling innate feeble-mindedness . . . or, on the other hand, to a degree of intelligence which, relatively speaking, resembles genius."

Again, Dr. Reid as sociologist says (p. 439): "It is better to exhaust the possibilities which may be achieved by such means as improved food, housing, and physical and mental training, before we attempt to tread the difficult and dangerous path of selective breeding."

We agree that it is desirable to continue and develop our present efforts to improve the physical condition and environment of the individual. But if, at the same time, we neglect the other factor which enters into the well-being of the race, we may find the product diminishing, though one factor may for a time still increase.

But the chief point we wish to make on the question is this. People often speak with Dr. Reid in the last quoted passage as though selective breeding were a new and revolutionary proposal. So it would be if applied to the individual. No sane man proposes to breed men as we breed short-horns or southdowns. But the truth is that selective breeding is, and always has been, going on. Every change in legislation or social custom produces some effect, small it may be, but still finite, on the relative rate of reproduction of different classes or types among the people. The power and fashion of restricting the birth-rate has set up a very heavy selection in favour of the casual and thriftless. The Old Age Pensions Act may enable steady young folk to marry earlier by lightening for them the burden of the older generation, but, on the other hand, it may diminish the desire for children, which, in the class of the manual workers, have been regarded partially as an insurance against destitution in old age. We believe that all legislation and all change in social customs need careful watching from the racial and eugenic point of view. The fact that so few of those who seek and secure popular election to a democratic legislature possess knowledge of or interest in this point of view is deeply to be deplored.

But Dr. Reid himself advocates conscious selection in cases with which he himself is familiar, namely in hereditary disease. Even with tuberculosis, where infection is necessary to bring out the hereditary pre-disposition, Dr. Reid treats the problem in a sound and thorough way. "It would seem, then," he concludes (p. 455), "that the only hope of permanently reducing

the mortality from tuberculosis lies in selection—probably, in the first instance at least, not a selection enforced by legal penalties, but one due to the presence of an enlightened public opinion which will regard as morally reprehensible the fertile marriages of phthisical types."

We are glad to end our review of Dr. Reid's book with an extract such as this, with the sentiment of which we are in complete agreement.

W. C. D. W.

Doncaster, L., M.A. *Heredity in the Light of Recent Research.* Cambridge University Press; 1910; pp. vii. and 140; price 1s. net.

THE relation between Heredity and Variation presents something of a paradox. Variation implies incomplete and imperfect inheritance, for if the resemblance between parent and child were complete and perfect there could be no variation. Yet if there were no variation there could be no inheritance or at any rate no possibility of recognising it. The study of inheritance is the study of the inheritance of variations, so that any logically arranged treatise on heredity must begin with the consideration of variation. This order has been observed by Mr. Doncaster, who attacks the question of variation immediately after a short introductory chapter in which the problems of inheritance are defined and their bearings on the theory of evolution and on social questions are indicated. He describes different types of variation—continuous and discontinuous—,the statistical method of studying and measuring variability, and discusses its causes and the action of the environment on the body and germ cells, Chapter IV. deals with the biometrical study of inheritance; a method of measuring the correlation between father and son with regard to such a character as stature is briefly described and Galton's Law of Ancestral Inheritance is discussed. Mendelism forms the subject-matter of Chapters V. and VI. In Chapter VII. some disputed questions are discussed. These include some objections to the universal applicability of the Mendelian theory and the ever-present problem of the inheritance or non-inheritance of acquired characters. With regard to the latter the author sums up in the following words, with which the majority of biologists will agree: "On the whole, the hypothesis of the inheritance of acquired characters must be regarded as 'not proven,' and our increasing knowledge of the behaviour of germinal characters makes it improbable that it can be a factor of great importance in the constitution of the individual or to the course of evolution." Telegony and the theory of maternal impressions are described and dismissed; they owe their origin to that ignorance of the nature of evidence which is perhaps the most widely diffused form of ignorance. The chapter on Heredity in Man should prove of especial interest to students of eugenics; it concludes the principal part of the work. Two appendices are added, the first an historical summary of theories of heredity and the second on the material basis of inheritance. There is also a useful list of literature, a sufficient glossary of technical terms and an index.

We can strongly recommend this work to everyone beginning the study of heredity and can safely assert that people familiar with the subject will derive benefit by reading it. Considering that almost all points of importance raised by recent research are adequately dealt with, the book is wonderfully short and easily followed. The print, paper and illustrations are also admirable.

E. H. J. S.

Davenport, G. C. and C. B. *Heredity of Skin Pigment in Man. American Naturalist;* 1910.

IN this paper Dr. Davenport and his wife discuss some data collected by them and bearing upon the question of the inheritance of skin pigmentation in whites and negroes. The whites were divided into three classes, brunet,